

AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph starting at page 46, line 16 and ending at page 47, line 19 as follows:

A nitrocellulose filter is placed on a 150 mm plate containing LB-ampicillin (50 µg/ml) medium, and *E.coli* XL-Blue MR cells (Stratagene) transfected with cosmid pools of the *Chlamydomonas* genomic DNA library are spread on the nitrocellulose filters (master filters), and incubated at 37°C overnight to produce  $\sim 5 \times 10^5$  colonies per plate. Each master filter is replicated and the replicas are used for hybridization with PPO gene probes. The replica filters are placed sequentially for five min each on Whatman 3MM paper soaked in denaturing solution (0.5 M NaOH, 1.5 M NaCl) to lyse the bacterial cells, in neutralizing solution (0.5 M Tris-HCl (pH7.4)), and in 2X SSC at room temperature, air dried on 3MM paper for 30 min and then baked at 80°C under vacuum for two hours to bind the DNA to the nitrocellulose. The filters are then incubated at 42°C for about one hour in hybridization buffer (2X PIPES buffer, 50% deionized formamide, 0.5% (w/v) SDS, 500 µg/ml denatured sonicated salmon sperm DNA), followed by hybridization in the same buffer at 42°C overnight with labeled probes at  $\sim 1 \times 10^6$  cpm/ml. After washing the filters in 2X SSC, 1% (w/v) SDS, positive signals can be detected by

autoradiography. For higher stringencies, the filters may be washed for 60 minutes in 300-500 ml of a solution of 0.2X SSC and 0.1% SDS at 68°C. The hybridization probes consist of DNA fragments comprising the nucleotide sequence of SEQ. ID. No.: 4, or part of it, labeled with  $^{32}\text{P}$  using a commercially available random priming kit for DNA labeling (Takara Shuzo Co., Ltd.) or a 5'-end labeling kit (MEGALABEL, Takara Shuzo Co., Ltd.). Colonies at positions showing positive hybridization signals are scraped from the master filter and suspended in 100  $\mu\text{l}$  of LB + ampicillin (50  $\mu\text{g}/\text{ml}$ ) medium. After spreading 100 to 1000 cells on a nitrocellulose filter and ~~incubating~~ incubating it on a plate (150 mm) of LB + ampicillin (50  $\mu\text{g}/\text{ml}$ ) medium at 37°C overnight, the filter is replicated. This replica filter is then used to repeat the hybridization according to the aforementioned methods to isolate positive clones.